

FIG. 1

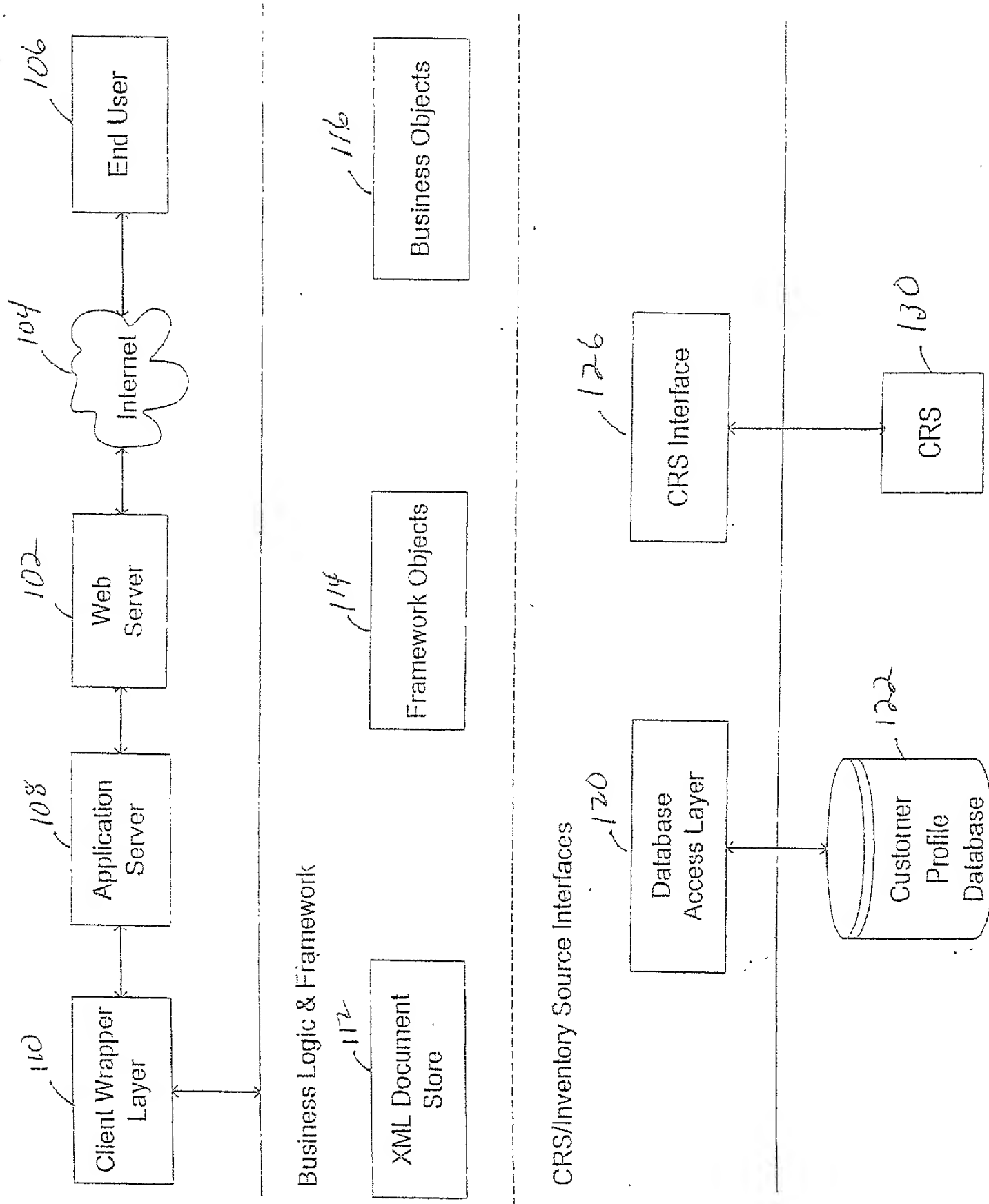


FIG. 2

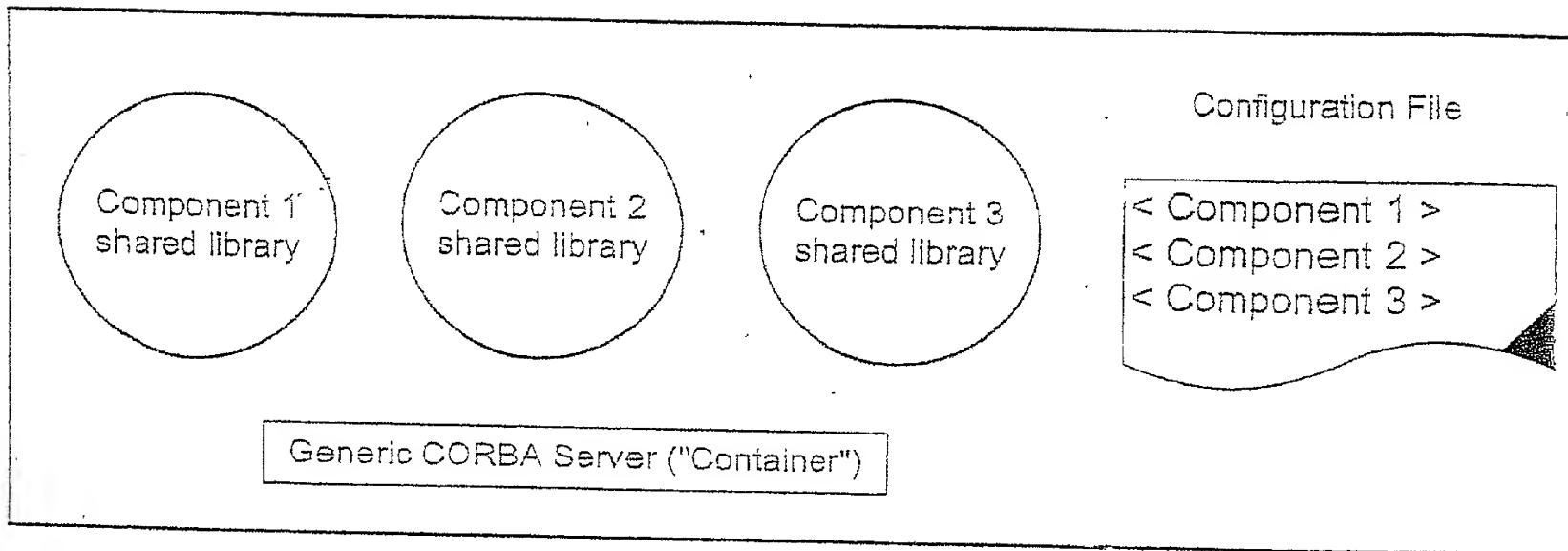
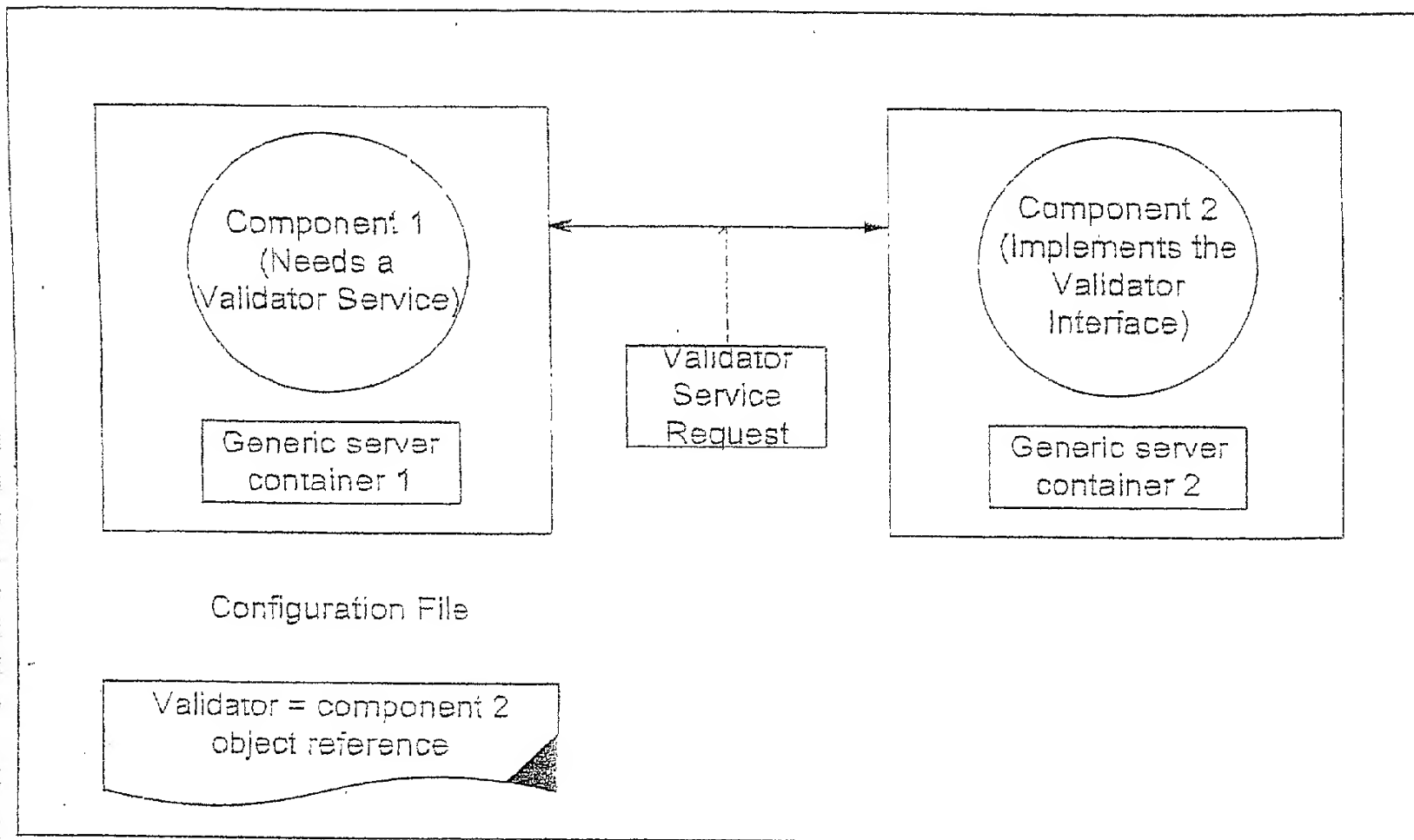


FIG. 3



4/17

FIGURE 4A

```
<Server Name="Bk/CityCodeLookupSvr">
  <Attributes>
    <Simple Name="Timeout">0</Simple>
    <Simple Name="ThreadPolicy">thread-pool</Simple>
    <Simple Name="MaxThreads">20</Simple>
    <Simple Name="Description">This server contains components related to Car related Code
    Lookups.</Simple>
    <Simple
Name="IncludeFile">/net/godzilla/usr2/BookSmart/v2.0/run/CORBA/TraderInclude.xml</Simple
le>
  </Attributes>
    <InternalComponents>
    <Component Name="CityCodeLookup">
      <Creator Name="ConverterCreator"
        Library="libSnSFrameworkConverterCreators.so"/>
      <Relationships>
      </Relationships>
        <Attributes>
          <Simple Name="ServiceType">CityCodeLookup</Simple>
          <Simple Name="SubstringMatch">True</Simple>
          <Simple Name="TagName">City</Simple>
          <Simple Name="CodeAttribute">Code</Simple>
          <Simple Name="NameAttribute">Value</Simple>
          <Simple Name="Library">libora12d0146.so</Simple>
          <Simple Name="Database">WG80</Simple>
          <Simple Name="UserName">BROADVISION</Simple>
          <Simple Name="Password">BROADVISION</Simple>
          <Simple Name="Table">BK_CITY_MAST</Simple>
          <Simple Name="CodeColumn">CITY_CODE</Simple>
          <Simple Name="NameColumn">CITY_NAME</Simple>
          <Simple
Name="CodeIsPrimaryColumn">ISPRIMARY_FLAG</Simple>
          <Sequence Name="Attributes" Type="Simple">
            <Simple
Name="AttributeColumn">COUNTRY_CODE</Simple>
            <Simple
Name="AttributeColumn">CURRENCY_CODE</Simple>
            <Simple
          </Sequence>
        </Attributes>
      </Component>
```

FIGURE 4B

```

<Component Name="CityCodeStrictLookup">
  <Creator Name="ConverterCreator"
    Library="libSnSFrameworkConverterCreators.so"/>
  <Relationships>
  </Relationships>
  <Attributes>
    <Simple Name="ServiceType">CityCodeStrictLookup</Simple>
    <Simple Name="VerboseErrors">True</Simple>
    <Simple Name="SubstringMatch">True</Simple>
    <Simple Name="TagName">City</Simple>
    <Simple Name="CodeAttribute">Code</Simple>
    <Simple Name="NameAttribute">Value</Simple>
    <Simple Name="Library">libora12d0146.so</Simple>
    <Simple Name="Database">WG80</Simple>
    <Simple Name="UserName">BROADVISION</Simple>
    <Simple Name="Password">BROADVISION</Simple>
    <Simple Name="Table">BK_CITY_MAST</Simple>
    <Simple Name="CodeColumn">CITY_CODE</Simple>
    <Simple Name="NameColumn">CITY_NAME</Simple>
    <Simple
Name="CodeIsPrimaryColumn">ISPRIMARY_FLAG</Simple>
    <Sequence Name="Attributes" Type="Simple">
      <Simple
Name="AttributeColumn">COUNTRY_CODE</Simple>
      <Simple
Name="AttributeColumn">CURRENCY_CODE</Simple>
      <Simple
Name="AttributeColumn">ISVALIDHOTELRENTAL_FLAG</Simple>
      <Simple Name="AttributeColumn">DAL</Simple>
      <Simple
Name="AttributeColumn">ISETCARRIERCHECK</Simple>
    </Sequence>
  </Attributes>
</Component>

</InternalComponents>
</Server>

```

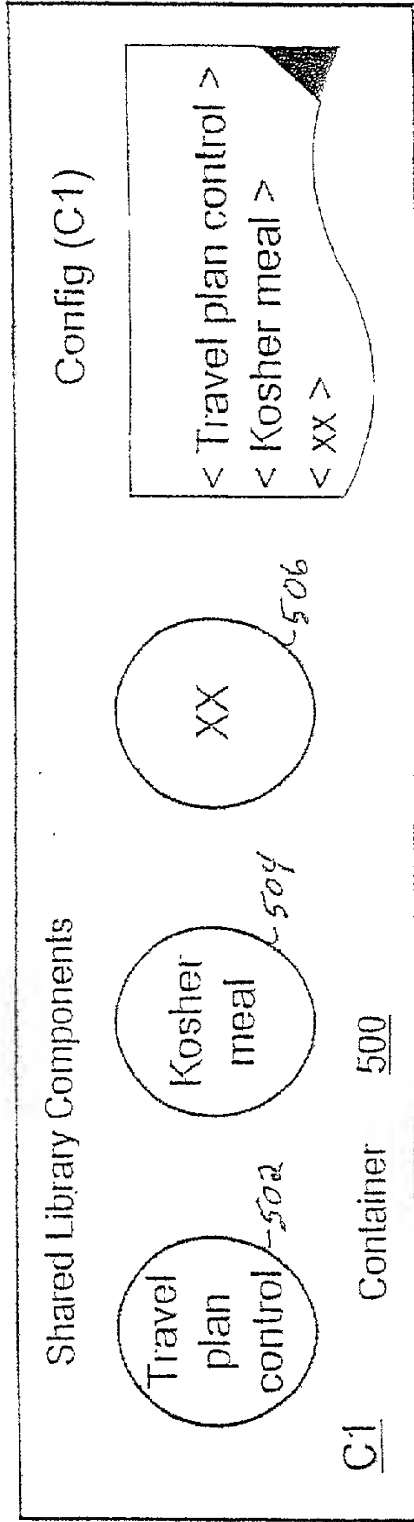


FIG. 5A

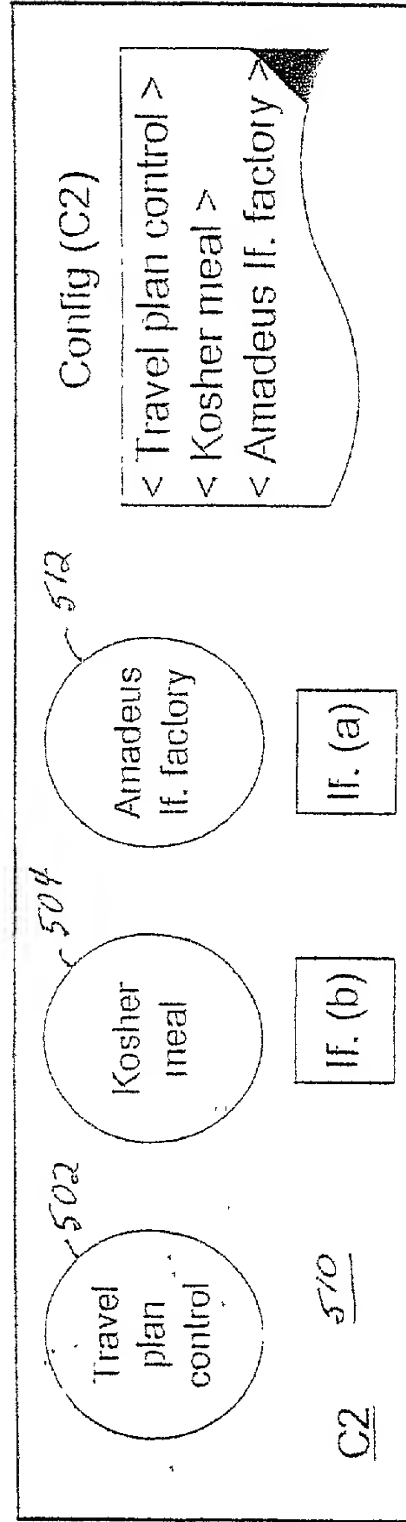


FIG. 5B

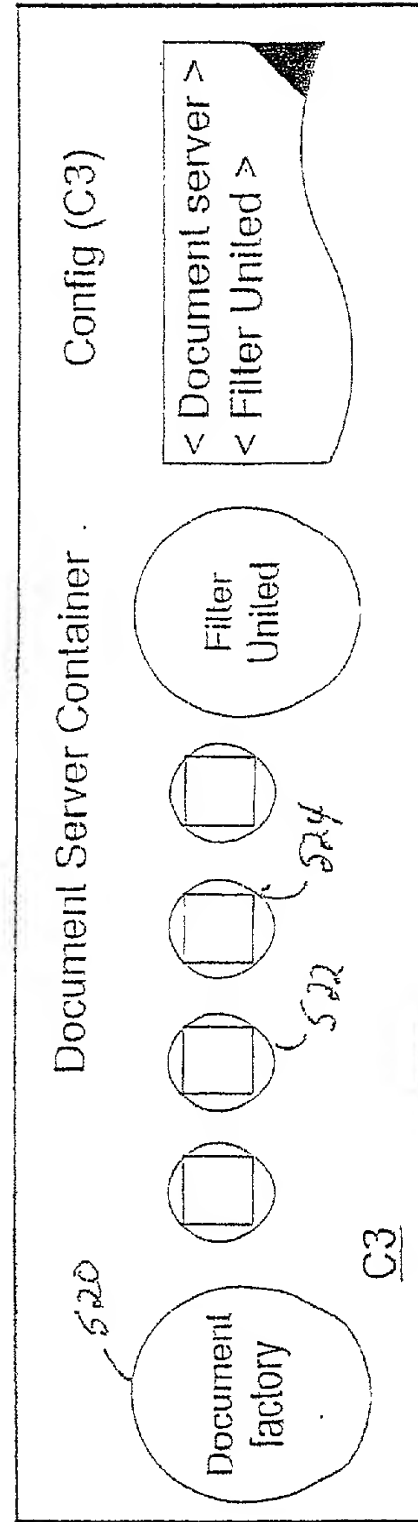
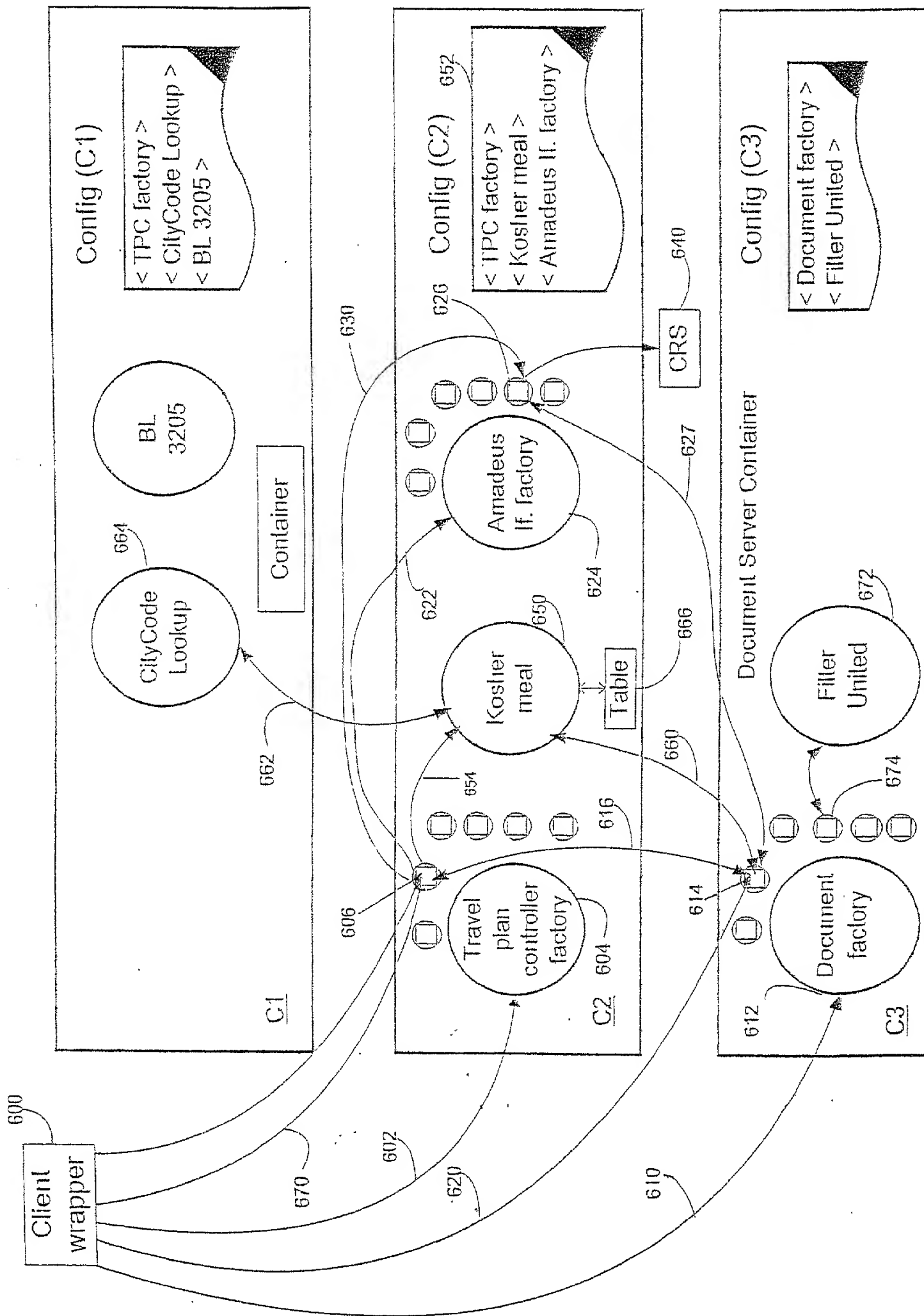


FIG. 5C

FIG. 6



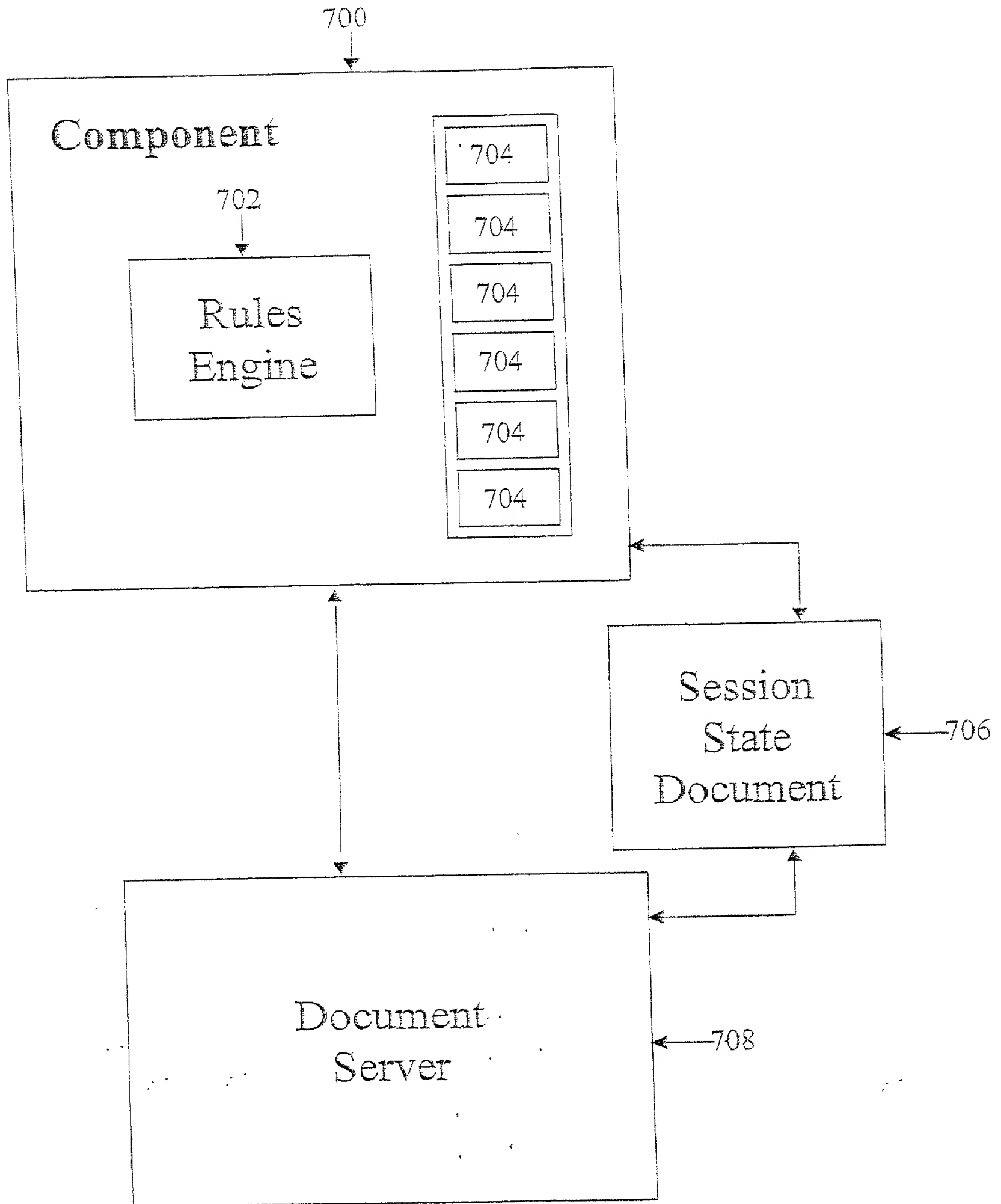


Fig. 7

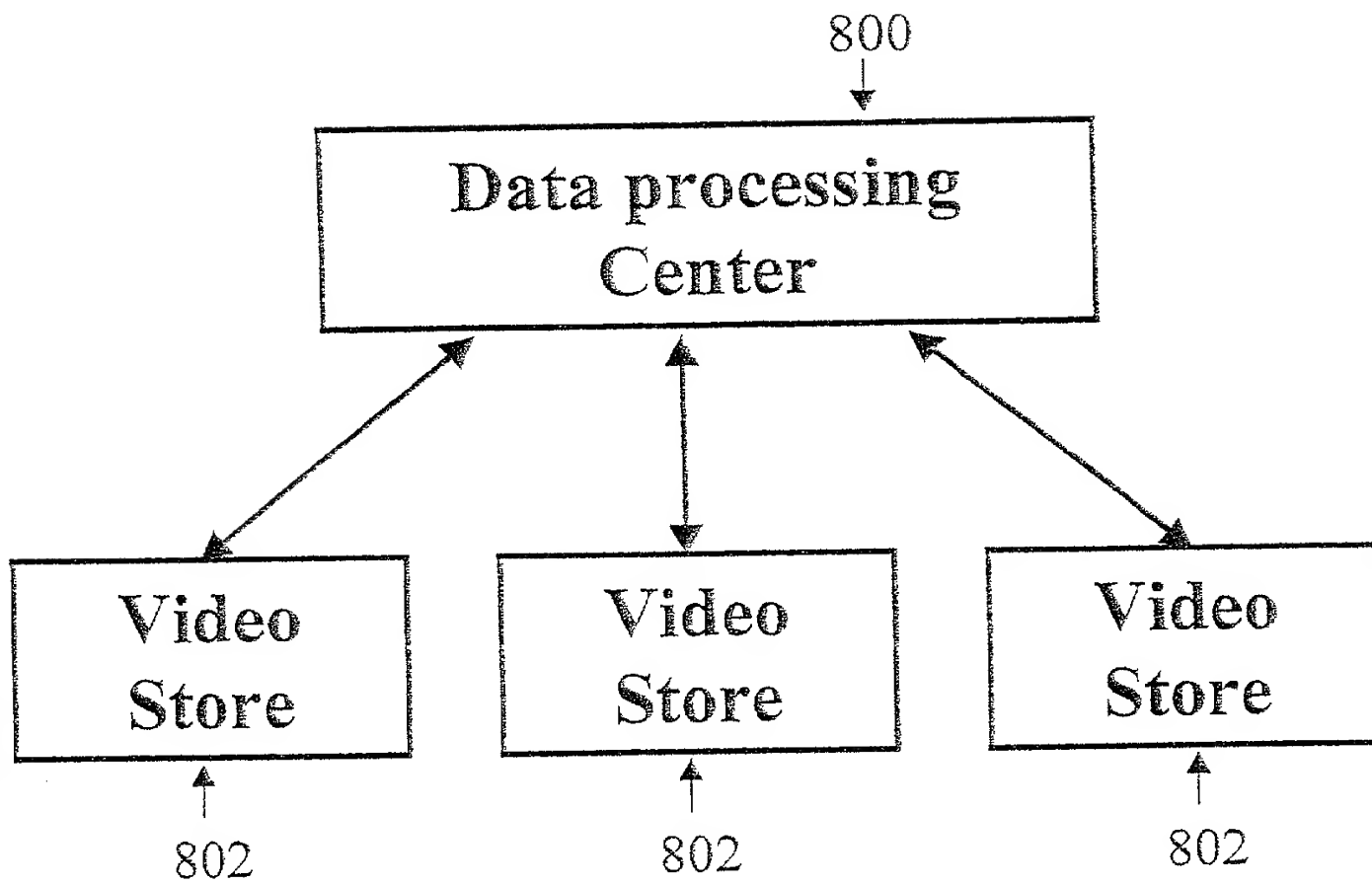


Fig. 8

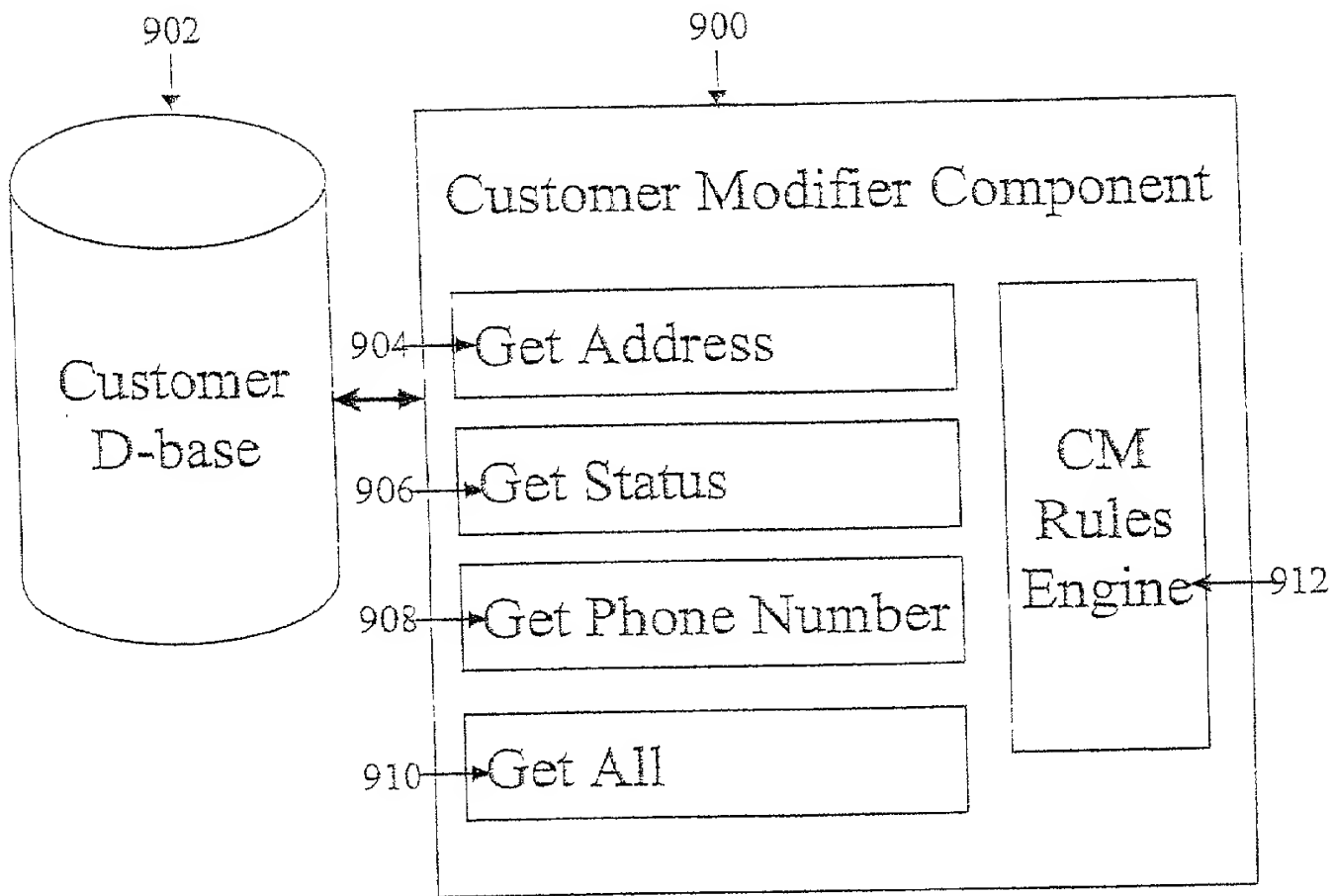


Fig. 9

11/17

Videostore Local Machine

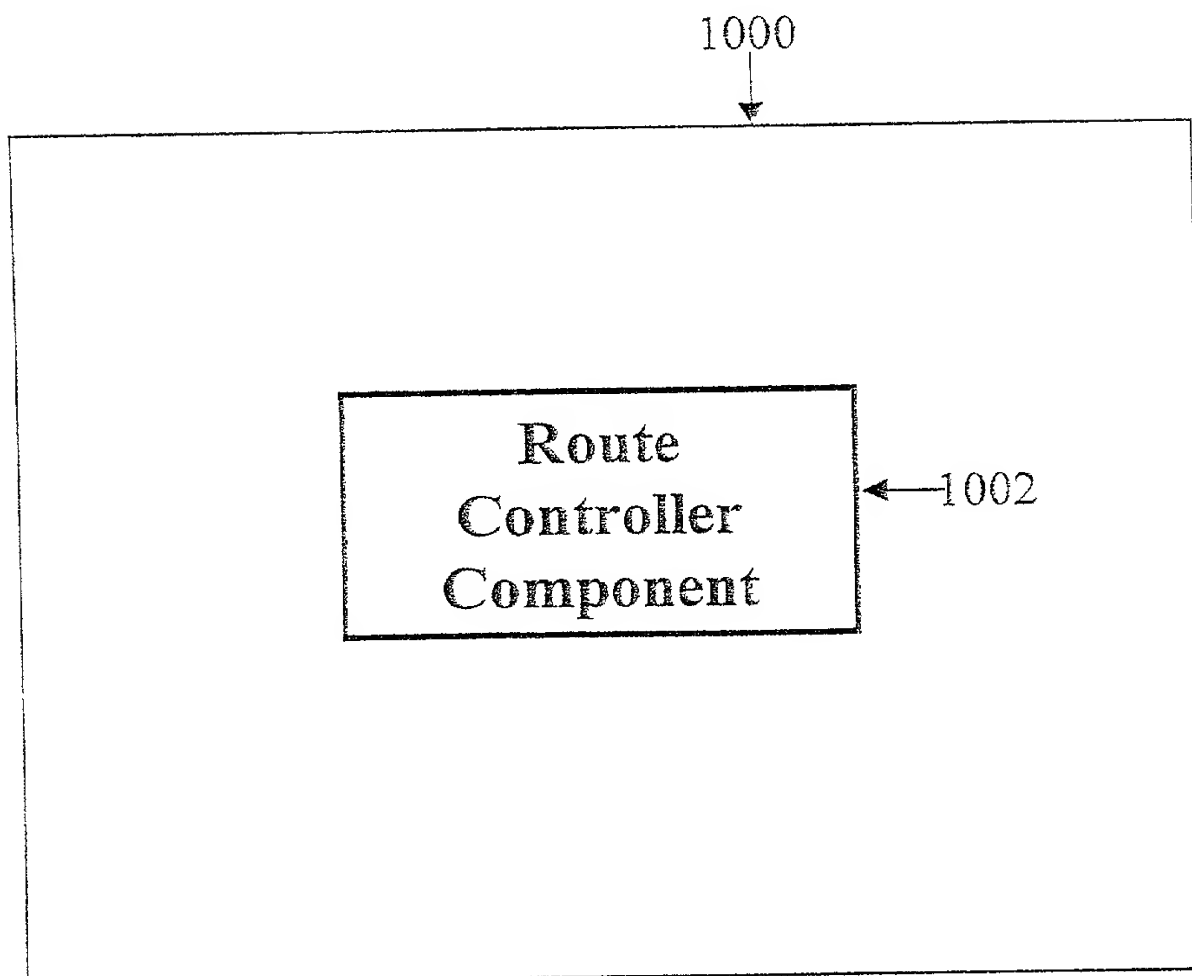


Fig. 10

Fig. 11A

RouteController's XML configuration file:

```
<Server Name="RouteControllerSvr">
  <Attributes>
    <Simple Name="ThreadPool">thread-pool</Simple>
    <Simple Name="MaxThreads">20</Simple>
    <Simple Name="IncludeFile">../TraderInclude.xml</Simple>
  </Attributes>
  <InternalComponents>
    <Component Name="RouteController">
      <Creator Name="SnSControllerCreator"
Library="libSnSFrameworkControllerCreators.so"/>
      <Relationships>
        <Uses Name="RentalSetupModifier" Component="CustomerModifier"
Type="Modifier" PersistConnection="False"/>
        <Uses Name="PromotionalModifier" Component="FrequentRentalModifier"
Type="Modifier" PersistConnection="False"/>
        <Uses Name="GatewayIFFactory" Component="GatewayIFFactory"
Type="Modifier" PersistConnection="False"/>
      </Relationships>
      <RuleSet Name="Standard" Default="True">
        <Process Label="ProcessRental"
ReleaseResources="True" OnFail="Stop">
          <Acquire ResourceType="GatewayIF"
ResourceKey="GatewayIF"
Instruction="GatewayIFFactory" OnFail="Stop"/>
          <Component ComponentType="Controller"
Name="GatewayIF"
FailIfNone="True" OnFail="Stop" Instruction="StoreRental">
            <Resource ResourceKey="InDocument" FailIfNone="True"/>
            <Resource ResourceKey="OutDocument" FailIfNone="True"/>
          </Component>
          <Component ComponentType="Modifier" Name="RentalSetupModifier"
FailIfNone="True" OnFail="Continue"
SpecialInstructions="Label=&quot;GetStatus&quot; ">
            <Resource ResourceKey="InDocument" FailIfNone="True"/>
          </Component>
          <Process Query="Customer[@Status!= 'Normal']" OnFail="DoNothing">
            <Component ComponentType="Modifier"
Name="PromotionalModifier"
FailIfNone="True" OnFail="Stop"
SpecialInstructions="Label=&quot;ValuedPromo&quot; ">
              <Resource ResourceKey="InDocument" FailIfNone="True"/>
            </Component>
          </Process>
          <Process Query="Customer[@Status= 'Normal']" OnFail="DoNothing">
            <Component ComponentType="Modifier"
Name="PromotionalModifier"
FailIfNone="True" OnFail="Stop"
SpecialInstructions="Label=&quot;RegularPromo&quot; ">
```

Fig. 11B

```

    <Resource ResourceKey="InDocument" FailIfNone="True"/>
  </Component>
</Process>
<Process Query="Video[@Name='First Movie' OnFail="DoNothing"]>
  <Variable Name="InsertQuery" ValueType="Literal">
    Promo[Code=U15]
  </Variable>
  <Instruction Name="Insert" OnFail="Stop">
    <Resource ResourceKey="OutDocument" FailIfNone="True"/>
  </Instruction>
  <Variable Name="InsertQuery" ValueType="Literal">
    Remark[Type=Important][Value="Give customer free First Movie
poster"]
  </Variable>
  <Instruction Name="Insert" OnFail="Stop">
    <Resource ResourceKey="OutDocument" FailIfNone="True"/>
  </Instruction>
</Process>
<Process Query="Promo" OnFail="DoNothing">
  <Component ComponentType="Controller" Name="GatewayIF"
    FailIfNone="True" OnFail="Stop"
    Instruction="StorePromoEntry">
    <Resource ResourceKey="InDocument" FailIfNone="True"/>
    <Resource ResourceKey="OutDocument" FailIfNone="True"/>
  </Component>
  </Process>
  </Process>
  <Process Label="DoNothing"/>
</RuleSet>
</Component>
</InternalComponents>
<ExternalComponents>
  <Component Name="CustomerModifier">
    <Locator Type="Trader" ID="CustomerModifier"/>
  </Component>
  <Component Name="GatewayIFFactory">
    <Locator Type="Trader" ID="GatewayIFFactory"/>
  </Component>
</ExternalComponents>
</Server>

```

Fig. 13

FrequentRentalModifier's XML configuration file:

```
<Server Name="FrequentRentalModifierSvr">
  <Attributes>
    <Simple Name="ThreadPolicy">thread-pool</Simple>
    <Simple Name="MaxThreads">20</Simple>
    <Simple Name="IncludeFile">../TraderInclude.xml</Simple>
  </Attributes>
  <InternalComponents>
    <Component Name="FrequentRentalModifier">
      <Creator Name="FrequentRentalModifer">
        Library="libFrequentRentalModifierCreators.so"/>
        <Attributes>
          <Simple Name="ServiceType">FrequentRentalModifier</Simple>
          <Simple Name="Library" Type="EnvVar">SB_DB_LIBRARY</Simple>
          <Simple Name="Database" Type="EnvVar">SB_DB_INSTANCE</Simple>
          <Simple Name="UserName" Type="EnvVar">SB_DB_USER_NAME</Simple>
          <Simple Name="Password" Type="EnvVar">SB_DB_PASSWORD</Simple>
          <Simple Name="Table">SB_RESERVATIONS</Simple>
          <Simple Name="IDColumn">ID</Simple>
          <Simple Name="RentalDateColumn">RENTAL_DATE</Simple>
        </Attributes>
        <Relationships/>
          <RuleSet Name="Standard" Default="True">
            <Process Label="RegularPromo">
              <Variable Name="DaysInPeriod">
                ValueType="Literal">30</Variable>
              <Variable Name="RentalsRequired">
                ValueType="Literal">10</Variable>
              <Variable Name="PromoCode" ValueType="Literal">U11</Variable>
              <Instruction Name="CheckQualification" OnFail="Stop">
                <Resource ResourceKey="InDocument" FailIfNone="True"/>
                <Resource ResourceKey="OutDocument" FailIfNone="True"/>
              </Instruction>
            </Process>
            <Process Label="ValuedPromo">
              <Variable Name="DaysInPeriod">
                ValueType="Literal">30</Variable>
              <Variable Name="RentalsRequired">
                ValueType="Literal">5</Variable>
              <Variable Name="PromoCode" ValueType="Literal">U12</Variable>
              <Instruction Name="CheckQualification" OnFail="Stop">
                <Resource ResourceKey="InDocument" FailIfNone="True"/>
                <Resource ResourceKey="OutDocument" FailIfNone="True"/>
              </Instruction>
            </Process>
          </RuleSet>
        </Component>
      </InternalComponents>
    <ExternalComponents/>
  </Server>
```

Fig. 14

GatewayIF's XML configuration file:

```
<Server Name="GatewayIFSvr">
  <Attributes>
    <Simple Name="ThreadPolicy">thread-pool</Simple>
    <Simple Name="MaxThreads">20</Simple>
    <Simple Name="IncludeFile">../TraderInclude.xml</Simple>
  </Attributes>
  <InternalComponents>
    <Component Name="GatewayIFFactory">
      <Creator Name="SnSFactoryCreator"
        Library="libSnSFrameworkFactoryCreators.so"/>
      <ChildCreator Name="GatewayIFCreator"
        Library="libGatewayIFCreators.so"/>
      <Relationships/>
      <Attributes>
        <Simple Name="ServiceType">GatewayIFFactory</Simple>
        <Simple Name="Policy">PoolAsNeeded</Simple>
        <Simple Name="ProductsAreGateways">True</Simple>
        <Simple Name="PoolSize">20</Simple>
        <Simple Name="AvailableBuffer">6</Simple>
        <Simple Name="AvailableLimit">10</Simple>
        <Simple Name="MaintenanceThreads">1</Simple>
        <Simple Name="MaintenanceThreadWakeUp">30</Simple>
        <Simple Name="MakeIsValidCheckEachGet">False</Simple>
        <Simple Name="MakeIsValidCheckPeriodically">False</Simple>
        <Simple Name="PeriodicIsValidPause">60</Simple>
        <Simple Name="CreatorName">GatewayIFCreator</Simple>
      </Attributes>
    <Children Name="GatewayIF">
      <RuleSet Name="Standard" Default="True">
        <Process Label="StoreRental">
          <Instruction Name="StoreRental" OnFail="Stop">
            <Resource ResourceKey="InDocument" FailIfNone="True"/>
            <Resource ResourceKey="OutDocument" FailIfNone="True"/>
          </Instruction>
        </Process>
        <Process Label="StorePromoEntry">
          <Instruction Name="StorePromoEntry" OnFail="Stop">
            <Resource ResourceKey="InDocument" FailIfNone="True"/>
            <Resource ResourceKey="OutDocument" FailIfNone="True"/>
          </Instruction>
        </Process>
      </RuleSet>
    </Children>
  </Component>
</InternalComponents>
<ExternalComponents/>
</Server>
```


Fig. 15

CustomerModifier's XML configuration file:

```
<Server Name="CustomerModifierSvr">
  <Attributes>
    <Simple Name="ThreadPolicy">thread-pool</Simple>
    <Simple Name="MaxThreads">20</Simple>
    <Simple Name="IncludeFile">../TraderInclude.xml</Simple>
  </Attributes>
  <InternalComponents>
    <Component Name="CustomerModifier">
      <Creator Name="CustomerModifier" Library="libCustomerModifierCreators.so"/>
      <Attributes>
        <Simple Name="ServiceType">erCustomerModifier</Simple>
        <Simple Name="Library" Type="EnvVar">SB_DB_LIBRARY</Simple>
        <Simple Name="Database" Type="EnvVar">SB_DB_INSTANCE</Simple>
        <Simple Name="UserName" Type="EnvVar">SB_DB_USER_NAME</Simple>
        <Simple Name="Password" Type="EnvVar">SB_DB_PASSWORD</Simple>
        <Simple Name="Table">SB_CUSTOMER</Simple>
        <Simple Name="IDColumn">ADDRESS</Simple>
        <Simple Name="AddressColumn">ADDRESS</Simple>
        <Simple Name="StatusColumn">STATUS</Simple>
        <Simple Name="PhoneColumn">PHONE</Simple>
      </Attributes>
      <Relationships/>
        <RuleSet Name="Standard" Default="True">
          <Process Label="GetAddress">
            <Instruction Name="GetAddress" OnFail="Stop">
              <Resource ResourceKey="InDocument" FailIfNone="True"/>
              <Resource ResourceKey="OutDocument" FailIfNone="True"/>
            </Instruction>
          </Process>
          <Process Label="GetStatus">
            <Instruction Name="GetStatus" OnFail="Stop">
              <Resource ResourceKey="InDocument" FailIfNone="True"/>
              <Resource ResourceKey="OutDocument" FailIfNone="True"/>
            </Instruction>
          </Process>
          <Process Label="GetPhoneNumber">
            <Instruction Name="GetPhoneNumber" OnFail="Stop">
              <Resource ResourceKey="InDocument" FailIfNone="True"/>
              <Resource ResourceKey="OutDocument" FailIfNone="True"/>
            </Instruction>
          </Process>
          <Process Label="GetAll">
            <Instruction Name="GetAll" OnFail="Stop">
              <Resource ResourceKey="InDocument" FailIfNone="True"/>
              <Resource ResourceKey="OutDocument" FailIfNone="True"/>
            </Instruction>
          </Process>
        </RuleSet>
      </Component>
    </InternalComponents>
    <ExternalComponents/>
  </Server>
```